

DERWENT-ACC-NO: 1996-153299

DERWENT-WEEK: 200203

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TITLE: Determining colour tone of
coating containing glitter -
comparing directional
reflection characteristic values
w.r.t. lightness, saturation
and hue with reference
values, using detectors
positioned at three reflection
directions at three angles
w.r.t. normal reflection angle

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PRIORITY-DATA: 1994JP-0224834 (September 20, 1994)

PATENT-FAMILY:

PUB-NO	PAGES	PUB-DATE
LANGUAGE		MAIN-IPC
GB 2293448 A		March 27, 1996
N/A	030	G01J 003/46
JP 3234753 B2		December 4, 2001
N/A	016	G01J 003/50
JP 08145797 A		June 7, 1996
N/A	010	G01J 003/50
GB 2293448 B		December 11, 1996
N/A	001	G01J 003/46
US 5583642 A		December 10, 1996
N/A	010	G01J 003/50

INT-CL (IPC): G01J003/46, G01J003/50 ,
G01N021/27 , G01N021/47

ABSTRACTED-PUB-NO: GB 2293448A

BASIC-ABSTRACT:

The colour tone determin. involves illuminating (10) a sample coating (S) containing glitter, and measuring the reflected light using detectors (12,14,16) in three directions, i.e. 15, 45, and 75 or 110 degrees from the normal reflection angle.

One of a number of reference colour tones, whose colour difference with the sample is at a minimum, is determined. Characteristic values of the reflected light w.r.t. lightness, saturation and hue are determined, and compared with corresp. values from reference colour tones, to obtain the corresp. colour differences, from which a weighted mean is calculated.

ADVANTAGE - Provides high measurement accuracy esp. w.r.t. e.g. interference mica colours, low lightness colours, and colours of paints containing new glitter.

ABSTRACTED-PUB-NO: GB 2293448B

EQUIVALENT-ABSTRACTS:

A method of determining the colour tone of a coating which contains glitter, comprising the steps of: (a) measuring light reflected from a sample coating which contains glitter when the sample coating is illuminated with illuminating

light at an angle of about 45 degrees from the normal to the sample coating, in three directions that are angularly spaced by angles of about 15 degrees, about 45 degrees, and about 75 degrees or about 110 degrees from the direction of regular reflection of illuminating light toward the direction in which the sample coating is illuminated with illuminating light; (b) determining directional reflection characteristic values with respect to lightness, saturation, and hue from reflected lights from the sample coating which are measured respectively in the three directions; (c) determining at least one of a lightness difference, a saturation difference, and a hue difference of directional reflection characteristic values from directional reflection characteristic values of reference colour tones with respect to lightness, saturation, and hue and the directional reflection characteristic values determined in the step (b); and (d) determining the colour tone of the sample coating based on at least one of the lightness difference, the saturation difference, and the hue difference which is selected depending on colour tone characteristics of the reference colour tones.

US 5583642A

A method of determining the color tone of a coating which contains glitter, comprising the steps of:

(a) measuring light reflected from a sample coating which contains glitter when

the sample coating is illuminated with illuminating light at an angle of about 45deg. from the normal to the sample coating, in three directions that are angularly spaced by angles of about 15deg., about 45deg., and about 75deg. or about 110deg. from the direction of regular reflection of illuminating light toward the direction in which the sample coating is illuminated with illuminating light;

(b) determining directional reflection characteristic values with respect to lightness, saturation, and hue from reflected lights from the sample coating which are measured respectively in said three directions;

(c) determining at least one of a lightness difference, a saturation difference, and a hue difference of directional reflection characteristic values from directional reflection characteristic values of reference color tones with respect to lightness, saturation, and hue and said directional reflection characteristic values determined in said step (b); and

(d) determining the color tone of the sample coating based on at least one of the lightness difference, the saturation difference, and the hue difference which is selected depending on color tone characteristics of said reference color tones.

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Equivalent Abstract Text - ABEQ (1):

A method of determining the colour tone of a coating which contains glitter, comprising the steps of: (a) measuring light reflected from a sample coating which contains glitter when the sample coating is illuminated with illuminating light at an angle of about 45 degrees from the normal to the sample coating, in three directions that are angularly spaced by angles of about 15 degrees, about 45 degrees, and about 75 degrees or about 110 degrees from the direction of regular reflection of illuminating light toward the direction in which the sample coating is illuminated with illuminating light; (b) determining directional reflection characteristic values with respect to lightness, saturation, and hue from reflected lights from the sample coating which are measured respectively in the three directions; (c) determining at least one of a lightness difference, a saturation difference, and a hue difference of directional reflection characteristic values from directional reflection characteristic values of reference colour tones with respect to lightness, saturation, and hue and the directional reflection characteristic values determined in the step (b); and (d) determining the colour tone of the sample coating based on at least one of the lightness difference, the saturation difference, and the hue difference which is selected depending on colour tone characteristics of the reference colour tones.